

## United States Patent and Trademark Office



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

DATE MAILED: 04/12/2006

APPLICATION NO.	FI	LING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
09/913,886	08/21/2001		Shinji Yamamoto	60188-355 5991	
20277	7590	04/12/2006		EXAMINER	
		LL & EMERY LLF	LE, KAREN L		
600 13TH STREET, N.W. WASHINGTON, DC 20005-3096				ART UNIT	PAPER NUMBER
				2614	2614

Please find below and/or attached an Office communication concerning this application or proceeding.

		· · · · · · · · · · · · · · · · · · ·
	Application No.	Applicant(s)
Supplemental	09/913,886	YAMAMOTO ET AL.
Notice of Allowability	Examiner	Art Unit
	Karen L. Le	2642
The MAILING DATE of this communication appearance All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RI of the Office or upon petition by the applicant. See 37 CFR 1.313	(OR REMAINS) CLOSED in this apport or other appropriate communication GHTS. This application is subject to	plication. If not included will be mailed in due course. <b>THIS</b>
1. ☐ This communication is responsive to <u>printer rush 12/19/05</u> .		
2. The allowed claim(s) is/are 1-6 and 9-17.		
3.	e been received.  been received in Application No cuments have been received in this  of this communication to file a reply IENT of this application.  itted. Note the attached EXAMINER bes reason(s) why the oath or declarate the submitted.  con's Patent Drawing Review ( PTO- cons Amendment / Comment or in the Cons  as Amendment / Comment or in the Cons  as Amendment / Comment or the drawle the header according to 37 CFR 1.121(cons  as to BIOLOGICAL MATERIAL in	national stage application from the complying with the requirements  'S AMENDMENT or NOTICE OF tion is deficient.  948) attached  Office action of the back) of d).  nust be submitted. Note the
Attachment(s)  1. Notice of References Cited (PTO-892)  2. Notice of Draftperson's Patent Drawing Review (PTO-948)  3. Information Disclosure Statements (PTO-1449 or PTO/SB/0 Paper No./Mail Date  4. Examiner's Comment Regarding Requirement for Deposit of Biological Material	6. ⊠ Interview Summary Paper No./Mail Dat 8), 7. ⊠ Examiner's Amendn	

Application/Control Number: 09/913,886

Art Unit: 2614

## **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Sathaniel Mcqueen, Registration No. 53,308 on 3/27/06.

The specification on pages 8 and 9 has been amended as follows: shared, with an output side return loss being less than or equal to -6 dB over an entire extent of each frequency range.

The invention of claim 12 is the semiconductor apparatus of claim 4 or 5, wherein a grounded capacitor is connected in parallel to the constant current source.

The invention of claim 13 is the semiconductor apparatus of claim 12, wherein an impedance value of the grounded capacitor for a frequency of the signal having a lowest frequency range among the two or more input signals is set to be sufficiently small for an impedance value of the constant current source.

The invention of claim 14 is the semiconductor apparatus of claim 12 or 13, wherein an inductor is connected to a source of the field effect transistor.

The invention of claim 15 is the semiconductor apparatus of claim 14, wherein the inductor is arranged in series with the grounded capacitor.

Application/Control Number: 09/913,886

Art Unit: 2614

The invention of claim 16 is the semiconductor apparatus of claim 1, 2 or 3, wherein the constant current source is provided with a control terminal for turning on/off the constant current source.

A communication apparatus of the invention of claim 17 includes a semiconductor apparatus of claim and an antenna, wherein the two or more signals having different frequency ranges that are received by the antenna are input to the respective semiconductor devices, or two or more signals having different frequency ranges that have been processed by the semiconductor devices are output from the antenna.

According to the invention of claims 1 to 10 and 17, with the above-described configuration, a plurality of semiconductor devices are turned on/off based on the voltage

applied to a control terminal provided in at least one of the semiconductor devices, thereby allowing for free selection of any one of the plurality of semiconductor devices. Therefore,

only one power supply SW is required while the prior art required the same number of power supply SWs as the number of semiconductor devices, and the plurality of semiconductor

devices and the constant current source can be packaged into a single device. Thus, the number of components is reduced, thereby realizing a reduction in the size of the portable terminal.

Application/Control Number: 09/913,886

Art Unit: 2614

device.

terminal of

Ġ

According to the invention of claim 11 an output terminal is shared by a plurality of semiconductor devices, thereby reducing the number of terminals of a single packaged

Furthermore, according to the invention of claims 12 and 13, in a case where each semiconductor device is provided by using a field effect transistor, the source

the field effect transistor is grounded for high frequencies and opened for direct currents by a grounded capacitor, thereby improving the high frequency characteristics.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen L. Le whose telephone number is 571-272-7487. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing F. Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should You

Art Unit: 2614

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

Karen Le

KLL

March 24, 2006

WING CHAN

SENIOR PRIMARY EXAMINER TECHNOLOGY CENTER 2600